

“Certification, Education and Training – A combined approach to security management”

FISSEA Conference

Wednesday, March 12th from 1:45pm-2:45pm.

Certification

- Description
 - Seeks to provide established criteria and a benchmark from which to test professionals
- What's Available?
 - Vendor Neutral
 - Vendor Specific
- Popularity
 - Study Time/Boot Camps
 - Cost
 - Certification Maintenance
- Quality of certifications
- Added value

Hiring Manager's perception of applicants with Certification qualifications

- Provides a baseline of tested knowledge/skills (validated minimal level of knowledge in the functions required for a specific job) upon which to build organizational-specific training
- National/international in scope, including training availability
- Leverage independent 3rd party review of processes, procedures (ANSI)
- Leverage/influence vice create/maintain content (currency, relevance)
- Baseline can be met across domains (e.g., DoD, IC, NIST, private sector, allies & coalitions)
- Cost pro-rated based on use
- ISO/IEC standard address concerns re
 - validation issues (EEO/Legal)
 - individual privacy
 - protection of test
 - openness of learning objectives
- Provides tool for attracting/retaining the best and brightest
- Creates a “critical mass” of expertise to enhance overall security posture

Trends in Certification for Government and Private Industry

- DoD mandating vendor neutral baseline IT security certifications
- State Department mandating vendor neutral entry level certifications; providing incentives for, but not mandating, other certifications
- OPM surveying the federal government to identify certifications being used

Tech I	Tech II	Tech III
A+ Network+ SSCP	GSEC Security+ SCNP SSCP	CISSP SCNA CISA GSE
Mgmt I	Mgmt II	Mgmt III
GSLC Security+ GISF	CISSP GSLC CISM	CISSP GSLC CISM

Academic Education

- Description
 - Attainment of an academic degree from an institute of higher education
 - Commitment to a minimum of 2-4 years of college courses
 - Courses taken with a wide-range of general education credits
- What's Available?
 - Academic Certificates 18 credit hours
 - 2-4 year degrees with concentration in Information Assurance
 - Advanced Degrees (Master's, PhD. and Doctorate)
- Popularity
 - Gaining popularity with focus on Homeland Security
 - Time commitment extensive compared to boot-camps, 1 week training, etc.
 - Cost over time
- Quality of Degrees
 - Selecting the right school – reputation and accreditation
 - Correct course of study
- Added value
 - Develop peripheral skills (reading, writing, human interaction skills, research, problem solving, critical thinking skills)
 - Formal recognition of completion of a robust program

Hiring Manager's perception of applicants with Academic Degree

- Part of an array of applicant evaluation options
- Debatable value
 - depends on needs of organization
- No match for having years of relevant experience
- What's the organization's culture?
- Life-long learning skills displayed?
- Long-term career/position prospects
 - technician may only need cert, managers need degrees
- Will not disqualify you from the job.

Trends in Academic Degrees for Government and Private Industry

- Focus curricula on Information Assurance and Homeland Security
- Advanced degrees with specific concentration in these areas
- Courses that teach to certification requirements

Training

- Description - Seeks to teach knowledge and skills that allow a person to perform a specific function
- What's Available?
 - Topic based
 - Role-based
 - Different delivery methods and developers
- Popularity
 - An interruption to “work”
 - Continuous requests to shorten it
- Quality of Training
 - Selecting the right course
 - Tailoring existing courses to meet specific needs
- Added value
 - Ability to keep current on new areas of knowledge and skills

Hiring Manager's perception of applicants with training qualifications

- Applicants with training alone are perceived as less desirable than those with certification, education, and/or work experience
- Applicants with certification, education, and/or work experience who have not taken some form of refresher training throughout their careers are perceived as less desirable than those who have taken refresher training.

Trends in training for Government and Private Industry

- Mostly topic-based
- More specialized/specific/tailored
- There is less emphasis on this area than the others in reference to employment requirements
- There is more emphasis on this area than the others when updating or maintaining skills and knowledge that are job-related
- Trends in training are being driven by the tendency to use as a metric the number of people provided training and the cost associated with that training and not performance improvement.

IT Security Body of Knowledge

Focus on “How to”

Example Subject Area Domains

	Policy	Management	Operations	Physical	Network	Application
Advanced						
Intermediate						
Beginning						

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Focus on "How to"

Example Subject Area Domains

	Policy	Management	Operations	Physical	Network	Application
Advanced			R		R	
Intermediate	R			R		R
Beginning		R				

Role-based

IT Security Body of Knowledge Focus on "How to"

Example Subject Area Domains

	Policy	Management	Operations	Physical	Network	Application
Advanced				Technical		
Intermediate	General Certification					
Beginning	Technical		Technical			

Certification

IT Security Body of Knowledge Focus on “How to”

Example Subject Area Domains

	Policy	Management	Operations	Physical	Network	Application
Advanced						
Intermediate						
Beginning						

Education

Expectations

Management

- Certification
 - Screening criteria
 - Proof of ability
 - Reduced hiring risk
- Education
 - Ability to learn
 - Foundation for training
 - Knowledge of new technologies
- Role-based training
 - Expense/Investment
 - Immediate payback
 - Tailored to business

Individual

- Certification
 - Entry barrier (License)
 - Increased pay
 - Networking
- Education
 - Career foundation
 - Advanced domain knowledge
 - Increased advancement potential
- Role-based training
 - How to do current job
 - Stepping stone for advancement

Education, Training & Certification

(An “A” team profile)

	Total Players (%)	Players w/ Related Cert	Players w/ Related BA/BS, MA/MS	Players w/ Related AA/AS	Total w/ Related Degree	Received Military specific IA/CND Training	No IA/CND Training
Active Duty	67%	18%	11%	16%	27%	82%	15%
Guard	7%	51%	12%	6%	18%	57%	3%
Reserves	1%	50%	50%	30%	80%	67%	16%
Civilians	7%	40%	20%	3%	23%	66%	9%
Contractor	18%	74%	27%	23%	50%	89%	6%
Totals	100%	31%	17%	16%	33%	78%	11%

- **Based on 482 respondents during one joint exercise**
- **DoD-wide, 10% of IA personnel hold baseline certification**
(Military, Civilians, Contractors)

Contacts

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